

Investigations in the Field of Quinones. XXVIII. Synthesis SOV/79-29-8-74/81
of the 5-Oxyindole Derivatives

ethane was used in the reaction process which led to a considerably higher yield. Compounds (I) - (VII) were obtained. In the methylation of (VI) with dimethylsulphate (VIII) was obtained. In order to achieve the synthesis of new growth stimulants of plants, the reaction of 5-oxyindoles with chloroacetic acid and a bromoacetate was tried. Under the influence of the acid on (II) in the presence of a 40% soda solution a good yield of compound (IX) was achieved. The condensation of the other 5-oxyindole derivatives only resulted in the initial indoles and in resins similar to polyglycol. The reaction of the phenolates of the 5-oxyindole derivatives with ethylbromoacetate is normal. A high yield of the substituted esters (X), (XI), and in the hydrolysis of esters, of the indolyl-5-oxyacetic acids (XII), (XIII), (XIV) was obtained. The table shows the derivatives of 5-oxyindole. There are 1 table and 10 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 2, 1958
Card 2/2

5(3)

SOV/79-29-8-74/81

AUTHORS: Grinev, A. N., Yermakova, V. N., Vrotek, Ye., Terent'yev, A. P.

TITLE: Investigations in the Field of Quinones. XXVIII. Synthesis of the 5-Oxyindole Derivatives

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2777 - 2782 (USSR)

ABSTRACT: The authors were interested in the synthesis of serotonin analogues (Ref 6) and the growth stimulants of plants (Refs 7,8) based on 5-oxyindole derivatives, and continued their previously not quite successful investigations (Refs 1-5) by trying to increase the indole derivative yield. They presupposed that the water forming in the course of the condensation process hydrolyzes the β -aminocrotonate (Scheme 1). The separation of ammonia and the amines, however, effects a polymerization of the initial quinone and other side reactions. In order to bind the water which has a detrimental effect, the anhydride of acetic acid and zinc chloride were used, but did not lead to a higher indole yield. In order to remove the water from the reaction mass, the azeotropic distillation with dichloro-

Card 1/2

Investigations in the Field of Quinones. XXVII. Synthesis SOV/79-29-8-73/81
of the Arylnaphthoquinones and Their Reactions With Sodium Cyanide

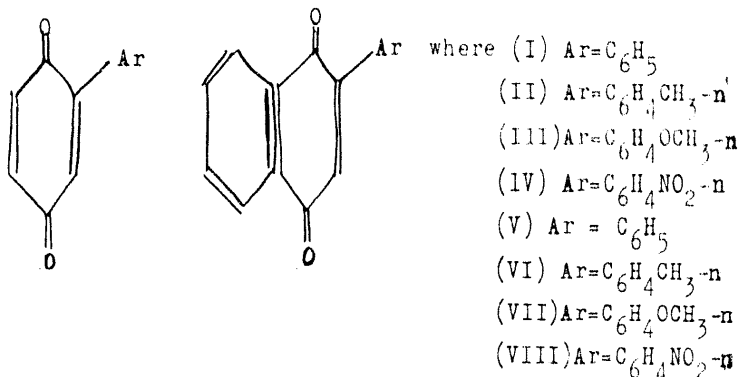
of the 2-aryl-1,4-naphthoquinones with NaCN was carried out (Scheme 1). This reaction took place by a gradual addition of the quinones dissolved in dioxan to the aqueous-alcoholic solution of the sodium cyanide in a nitrogen gas bag. The binding of NaCN to compound (III) is particularly easily effected. For the other 2-aryl-1,4-naphthoquinones small amounts of resins form in the reaction. At the reaction of *n*-benzo-1,4-naphtho- and 2-methyl-1,4-naphthoquinone with NaCN no cyanohydroquinones were separated. The structure of the 2-aryl-3-cyanonaphthohydroquinones was confirmed by oxidation into the corresponding quinones, analysis, and qualitative reactions (Scheme 2) (4 Tables). There are 4 tables and 7 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 2, 1958

Card 3/3

Investigations in the Field of Quinones. XXVII. Synthesis SOV/79-29-8-73/31
of the Arylnaphthoquinones and Their Reactions With Sodium Cyanide



The aryl-1,4-benzoquinones (I)-(IV) were synthesized with high yields by the arylation of the *n*-benzoquinone with diazo compounds in a way different from the German patent (Ref 2) only by adding sodium acetate to the quinone solution even before mixing with the diazo compound. The authors assume that the effect of the aryl substituent might favor the reaction of electric donor-acceptor affiliation. Therefore the reaction

Card 2/3

5(3), 5(4)

SOV/79-29-8-73/81

AUTHORS: Grinev, A. N., Klyagina, A. P., Terent'ev, A. P.

TITLE: Investigations in the Field of Quinones. XXVII. Synthesis of the Arylnaphthoquinones and Their Reactions With Sodium Cyanide

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2773 - 2777 (USSR)

ABSTRACT: Until recently the question of the influence of the electric donor-acceptor properties in the quinone nucleus upon the reactivity, the type of process, and its orientation remained unsolved. The difficulties encountered in the work are due to the fact that the reactions of the quinone series are, as a rule, accompanied by side reactions, an isomerization and decomposition of the intermediate products, and by redox processes. The non-existence of preparative synthesis methods of the substituted p-quinones also have an effect. In the present paper the synthesis of the compounds (V)-(VIII) from the aryl-1,4-benzoquinones (I)-(IV) and divinyl according to the method developed by Grinev and cooperators (Ref 1):

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Investigations in the Field of Quinones. SOV/79-29-3-40/61
XXVI. Condensation of n-Quinones With Furoyl Acetate, Acetyl Acetone, and
Dibenzoyl Methane

the reaction mass, as the redox side processes are eliminated in this way. Compound (VIII) was synthesized by the condensation of 2,3-dichloro-n-benzoquinone with the imine of acetyl acetone (90 % yield), which fact points to still another possible method. The reaction of α -naphthoquinone with dibenzoyl methane led to unexpected results. The resulting chief product was the adduct (IX), besides small amounts of compound (X). On the methylation of (IX) with dimethyl sulphate in alkaline medium, compound (XI) is obtained. There are 19 references, 13 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)
SUBMITTED: January 27, 1958

Card 2/2

5 (3)
AUTHORS:Grinev, A. N., Bukhtenko, L. A.,
Terent'yev, A. P.

SOV/79-22-3-40/61

TITLE:

Investigations in the Field of quinones (Issledovaniya v oblasti khinonov). XXVI. Condensation of n-quinones with Furoyl Acetate, Acetyl Acetone, and Dibenzoyl Methane (XXVI. Kondensatsiya n-khinonov a furoiluksusnym efirom, atsetilatsetonom i dibenzoilmetanom)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 945-949 (USSR)

ABSTRACT:

Continuing earlier papers (Refs 1-13) the present paper describes the reaction of n-benzoquinone and α -naphthoquinone with furoyl acetate, acetyl acetone, and dibenzoyl methane. The condensation of n-benzoquinone and α -naphthoquinone with furoyl acetate leads to compound (I), to a derivative of benzodifurane and to compound (II). The formulas (III) and (IV) are suggested for the structure of the derivative of benzodifurane. In reacting n-benzoquinone and α -naphthoquinone with acetyl acetone in the presence of zinc chloride the conditions were found, under which compounds (V) and (VII) are formed in yields of 60-65 %. The relatively high yields of these compounds can be obtained only by the gradual addition of the quinones into

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Investigations in the Field of Quinones. XXV. Synthesis of Naphthoquinones and Dihydro Anthraquinones

SOV/79-29-1-20/74

bromate. The following anthraquinones were obtained: 6-methyl-1,4-dihydro-1,4-endoethylene anthraquinone (V), 6,7-dimethyl-1,4-dihydro-1,4-endoethylene anthraquinone (VI), 2,3-dimethyl-1,4-dihydro anthraquinone (VII), 2,5,5-trimethyl-1,4-dihydro anthraquinone (VIII) and 2,5,6-trimethyl-1,4-dihydro anthraquinone (IX). The table gives the experimental results of the synthesis of dihydro anthraquinones. There are 1 table and 5 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: November 14, 1957

SOV/79-29-1-20/74

AUTHORS: Grinev, A. N., Yermakova, V. N., Terent'ev, A. P.

TITLE: Investigations in the Field of Quinones (Issledovaniya v oblasti khinonov) XXV. Synthesis of Naphthoquinones and Dihydro Anthraquinones (XXV. Sintez naftokhinonov i digidroantokhinonov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 90-92 (USSR)

ABSTRACT: In one of the earlier papers the authors showed that the easiest way to obtain 1,4-naphthoquinone and 2-methyl-1,4-naphthoquinone is from p-benzoquinone (toluquinone) and divinyl in which case the reaction takes place without separation of adducts and hydroquinones obtained from their isomerization (Ref 1). According to this method 6-methyl naphthoquinone (I) and 5-methyl naphthoquinone (II) were found in the present work. 6,7-dimethyl-1,4-naphthoquinone (III) was obtained in high yield by the oxidation of 6,7-dimethyl-5,8-dihydro-naphtho hydroquinone (Ref 2). 2,3-dichloro-p-naphthoquinone (IV) was obtained from 2,3-dichloro-p-benzoquinone and divinyl. Apart from this several quinones already characterized in the previous paper were oxidized in an acid medium with potassium

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SOV/79-29-1-19/74
Investigations in the Field of Quinones. XXIV. Isomerization of the Adducts
of p-Quinones With Diene Hydrocarbons

mentioned. There are 2 tables and 9 references, 6 of which
are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State
University)

SUBMITTED: November 16, 1967

Card 3/3

SCV/79-29-1-12/74

Investigations in the Field of Quinones. XXIV. Isomerization of the Adducts of p-Quinones With Diene Hydrocarbons

into the substituted hydroquinones without separation of the adducts. In the present paper the following hydroquinones were synthesized: 5,8-dihydro naphthohydroquinone (I), 6-methyl-5,8-dihydro naphthohydroquinone (II), 2-methyl-5,8-dihydro naphthohydroquinone (III), 6,7-dimethyl-5,8-dihydro naphthohydroquinone (IV), 2-chloro-5,8-dihydro naphthohydroquinone (V), 2,3-dichloro-5,8-dihydro naphthohydroquinone (VI), 2,3-dichloro-6-methyl-5,8-dihydro naphthohydroquinone (VII), 2,3-dimethyl-1,4-dihydro anthrahydroquinone (VIII), 2,5,5-trimethyl-1,4-dihydro anthrahydroquinone (IX), 2,3,6-trimethyl-1,4-dihydro anthrahydroquinone (X) and 6-methyl-1,4-dihydro-1,4-endo-ethylene anthrahydroquinone (XI). The quantity of reagents, reaction duration, melting points, yields and analyses of these hydroquinones are given in table 1. For the first time the adducts of 5-methyl naphthoquinone were synthesized with 2,3-dimethyl butadiene (XII), the adducts of 6-methyl naphthoquinone with 2,3-dimethyl butadiene (XIII) and the adducts of 6-methyl naphthoquinone with cyclohexadiene (XIV). Table 2 gives yields, melting points and analyses of the adducts

Card 2/3

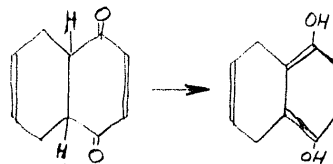
SOV/79-29-1-19/74

AUTHORS: Grinev, A. N., Yermakova, V. N., Terent'yev, A. P.

TITLE: Investigations in the Field of Quinones (Issledovaniya v oblasti khinonov) XXIV. Isomerization of the Adducts of p-Quinones With Diene Hydrocarbons (XXIV. Izomerizatsiya adduktov p-khinonov s dienovymi uglevodorodami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 86-89 (USSR)

ABSTRACT: An important method of synthesis of the substituted hydroquinones is the isomerization of the p-quinone adducts with diene hydrocarbons:



In this connection the authors suggest to carry out the isomerization of the adducts by boiling with acetic acid as they had already done in the case of synthesis of 2-methyl-5,8-dihydro-5,8-endocethylene naphtho-hydroquinone (Ref 6). This method permits the condensation of the quinones by diene hydrocarbons, as well as the isomerization of the adducts formed,

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GRINEV, A.N.

"Research in the field of p-quinones" by A.N.Grnev. Med.
prom. 13 no.4:62 Ap '59. (MIRA 12:6)
(QUINONE)

GRINEV, A. N.: Doc Chem Sci (disc) -- "Investigation of war-poisoned". Moscow, 1959. 16 pp (Moscow State U in M. V. Lomonosov), 170 copies (RI, No. 1, 1959, 195)

Synthesis of 1-Benzyl-2-Methyl-5-Methoxy Tryptamine SOV/20-121-5-27/50

achieved under conditions which deviate from the conditions of production of other nitrogen-substituted 5-oxy indolines (Refs 6 - 9). The methylation of the oxy-group of indole (I) takes place smoothly under the influence of dimethyl sulfate in an alkaline medium. The splitting off of the carbomethoxy group from 1-benzyl-2-methyl-3-carbomethoxy-5-methoxy indole (II) most probably passes through a stage of formation of a form of indoline in connection with an action of H_2SO_4 in acetic acid solution. The other stages of the process are carried out according to methods analogous to those given in publications (Refs 10,11). There are 11 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)

SUBMITTED: March 21, 1958

Card 2

AUTHORS: Grinev, A. N., Yermakova, V. N., 30V/20-121-5-27/60
 Terent'yev, A. P., Corresponding Member, AS USSR
 TITLE: Synthesis of 1-Benzyl-2-Methyl-5-Methoxy Tryptamine (Sintez
 1-benzil-2-metil-5-metoksitriptamina)
 PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 5,
 pp. 862-864 (USSR)
 ABSTRACT: E. Shaw (Ref 1, 1955) synthesized 1-benzyl-2-methyl-5-methoxy-
 -indole-3- acetic acid from the substituted phenyl-hydrazone
 of the methyl ether of levulinic acid by means of the Fischer
 (Fisher) reaction. Owing to the reduction of the amide of this
 acid by means of lithium-aluminium hydride, 1-benzyl-2-methyl-
 -5-methoxy tryptamine (VII) was produced. Clinical investiga-
 tions have shown that the latter substance being a benzyl ana-
 log of serotonin (BAS) has a higher physiological activity
 than its antimetabolite (Refs 2 - 5). A scheme of the synthe-
 sis of the substance (VII) carried out by the authors is
 given. The condensation of p-benzoquinone with the ethyl-ether
 of the N-benzyl- β -amino-crotonic acid with respect to
 1-benzyl-2-methyl-3-carbethoxy-5-oxy indole (I) has only been

Investigations in the field of quinones. III. The investigation of the condensation of 2-benzoylquinone and 2,4-dichloroquinone with Acetic Ester and its analogs

7 of which are Soviet.

ORIGINATION: Moskovskiy gosudarstvennyy universitet
(Moscow State University)

SUBMITTED: June 21, 1957

1. Benzoquinones--Chemical reactions 2. Chloroquinone--Chemical reactions 3. Condensation reactions 4. Acetic acid esters--Chemical reactions

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NOV/72-28-7-28/64

Investigations in the Field of Quinones. XXIII. The Investigation of the
Condensation of p-Benzoquinone and 2,4-Dichloroquinone With Acetic Ester
and Its Analogs

benzofurfurylacetic ester (II) is obtained without admixture of (III). The substituted ester (II) on boiling its solutions in alcohol and other solvents easily converts to (III). When the reaction is carried out at low temperatures it is possible to separate also a product with a melting point of $206,5 - 207^{\circ}$ besides (II) from the reaction products when the relative concentration of p-benzoquinone is increased; according to the analysis and the qualitative reactions carried out this product must be given the formula (IV). From the experiments carried out it may be concluded that the one or the other direction of the condensation of the quinones with esters of the β -keto acids, which may be easily controlled by the comparison of the yields of the derivatives of benzofurfurane and benzodifurfurane, does not only depend on the concentration of quinone in the reaction mixture but also to a considerable degree on temperature. Besides these factors mentioned also the nature of the reagent acting in the reaction with the quinones influences the yield of the derivatives of benzofurfurane and benzodifurfurane. There are 8 references.

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NOV 72-28-1-28/64

AUTHORS: Giney, A. N., Venevisova, N. K., Terent'ev, A. P.

TITLE: Investigations in the field of quinones (Issledovaniya v oblasti khinonov) (XIII. The Investigation of the Condensation of p-Benzoquinone and 2,5-Dichloroquinone with Acetic Ester and its analogs (XIII. Izucheniye kondensatsii p-benzokhinona i 2,5-dikhlorkhinona s atsetokislopnym estrom i yego analogami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 30, Nr 7, pp. 1856-1864 (USSR)

ABSTRACT: In the present paper the authors carried out the condensation of the p-benzoquinone with acetic ester at lower temperatures than was the case in their earlier papers (Refs 1 - 5); the results deviated from those earlier obtained. At 80-85° and at a low concentration of p-benzoquinone in the reaction mixture mainly (at low concentrations even exclusively) a benzofurfurane derivative (formula I) is obtained. At 41-45° at low concentrations the esters (II) and (III) are formed. When the reaction takes place at 18° only the substituted

Card 1/5

SECRET
A New Method **for** the Synthesis of Substituted Benzofurfurane- and Indole
From Esters of the Benzofurfurane- and Indole- β -Carboxylic Acids

1. Furan derivatives--Synthesis 2. Indoles--Synthesis 3. Carboxylic acid
esters--Chemical reactions 4. Substitution reactions 5. Carboxyl radicals
--Chemical effects

Card 3/4

SOV/79-28-7-27/64

A New Method of the Synthesis of Substituted Benzofurfurane- and Indole
From Esters of the Benzofurfurane- and Indole- β -Carboxylic Acids

tion could not be realized in these experiments at all. The authors by means of some examples suggest a convenient method for the cleavage of the esters of the benzofurfurane- and indole- β -carboxylic acids by their heating with equimolecular quantities of sulfuric or phosphoric acid in glacial acetic acid solution. The reaction takes place according to the mentioned scheme. Thus the authors by the action of sulfuric acid on the corresponding esters obtained the furfuranes (I), (II), (III) and the indole (IV), and by the action of phosphoric acid the indoles (V) and (VI). The 2-phenyl- β -carboxy-6,7-dichlorobenzofurfurane-5-oxyacetic acid was also subjected to the cleavage of sulfuric acid, with the compound (VII) having been obtained. There are 9 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
(Moscow State University)

SUBMITTED: June 18, 1957
Card 2/3

1. Furan derivatives--Synthesis
2. Substitution reactions
3. Plants--Growth
4. Growth substances--Synthesis

SOV/77-28-7-27/66

AUTHORS: Grinev, A. M., Zaytsev, I. A., Venevtseva, N. K.,
 Terent'yev, A. P.

TITLE: A New Method for the Synthesis of Substituted Benzofurfurane-
 and Indole From Esters of the Benzofurfurane- and Indole- β -
 Carboxylic Acids (Novyy metod polucheniya zameshchennykh
 benzofuranov i indolov iz efirov benzofuran-i indol- β -kar-
 bonovykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol. 28, Nr 7, pp. 1854-1855
 (USSR)

ABSTRACT: In many cases the esters of the substituted benzofurfurane-
 and indole- β -carboxylic acids were better accessible than
 the benzofurfuranes and indoles as such. The carboxyl group
 in these compounds is closely attached to them so that their
 cleavage demands strict conditions which lead to a great
 loss in substance (Refs 1, 2). In the experiments carried
 out to remove the carboxyl group from such and similar com-
 pounds the authors either met with difficulties, or the
 yields were too small (Refs 3 - 6). The synthesis of the
 N-alkyl- and N-aryl substituted indoles with a free β -posi-

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SOV/79-8-7-26, 22

The Alkylation of the Substituted 5-Oxybenzofurfuranes. The Synthesis of
the New Plant Growth Stimulators

in alkaline medium in the presence of dioxane. In the hydrolysis of the esters (I), (III), (V) and (VI) with alcoholate the furfuranes (VII), (VIII), (IX) and (X) were obtained. The acetic acids (XI) and (XII) were obtained as final products of the alkylation of the already earlier (Ref 1) synthesized oxyacids of the benzofurfurane series with chloroacetic acid. The potassium salts of the acids (VII) - (XII) proved to be highly effective plant growth stimulators as was shown by the evidence obtained by N. A. Bazilevskaya in the M. G. U. Botanical Garden. The results of the biological experiments with these products will be published later. There are 6 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)
SUBMITTED: June 18, 1957

SCV/77-28-7-26/64

AUTHORS: Grinev, A. M., Venytsheva, M. K., Mersal'yev, A. P.

TITLE: The Alyklation of the Substituted p-Oxybenzofurfuranes. The Synthesis of the New Plant Growth Stimulators (Alkiliroveniye zameshchennykh 5-oksibenzofuranov; sintez novykh stimulyatorov rosta rasteniy)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 22, Nr 7, pp. 1250-1253 (USSR)

ABSTRACT: The authors succeeded in elaborating a method of the synthesis of the substituted 5-oxybenzofurfuranes by the condensation of p-quinone with the esters of the 2-keto acids (refs 1 - 5), which practically made accessible a series of 5-oxybenzofurfurane derivatives. As a proof for the structure of the obtained compounds papers already existed on the methylation of some of these compounds with dimethyl sulfate, with either derivatives of the 5-methoxybenzofurfurane-3-carboxylic acids (Refs 3, 5), or their esters having been obtained, depending on the conditions prevailing (Ref 6). The compounds (I), (II), (III), (IV) and (V) were synthesized by the authors by the conversion of the 5-oxybenzofurfurane with dimethylsulfate

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Investigations in the Field of the Quinones.
XXII. Synthesis of Substituted Indoles.

72-2-57/64

ether of 1,2-dimethyl-5-methoxyindole-3-carboxylic acid and magnesium bromoethyl. The latter takes place evenly if a mixture of ether-benzene is used as solvent and yields, 1,2-dimethyl-3-(pentene-2-yl-3)-5-methoxyindole. Preparative and specific data are given. There are 8 references, 5 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet).

SUBMITTED: December 28, 1956.

AVAILABLE: Library of Congress.

Card 2/2

O.P.N.O.V. A.N.

AUTHORS: Grinev, A. N., Zaytsev, I. A., Shvedov, V. I.,
Terent'iyev, A. P.

77-2-37/64

TITLE: Investigations in the Field of the Quinones (Issledovaniya v oblasti khinonov).
XXII. Synthesis of Substituted Indoles (XXII. Sintez zameshchennykh indolov).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 447-452 (USSR).

ABSTRACT: It was already found that from the reaction of the imines of the acetyl-acetone with p-benzoquinone either substituted indoles or benzofuranes are obtained. This reaction was increased and by the condensation of the ethylether of β -aminocrotonic acid and of some of its derivatives with p-benzoquinone, 2,3-dichloro-p-benzoquinone, 2,5-dichloro-p-benzoquinone, and α -naphthoquinone the ethylethers of: the 1-(o-tolyl)-2-methyl-5-oxyindol-3-carboxylic acid, 1-cyclohexyl-2-methyl-5-oxyindol-3-carboxylic acid, 2-methyl-5-oxy-4,7-dichloro-indole-3-carboxylic acid, 2-methyl-4,7-dichloro-5-oxyindole-3-carboxylic acid, 1-ethyl-2-methyl-4,7-dichloro-5-oxyindole-3-carboxylic acid and 1-phenyl-2-methyl-5-oxybenzindole-3-carboxylic acid were obtained. The methylation and benzoylization of the oxyindoles were investigated in this and previous papers, as well as the reaction of the ethyl

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70-1-10/63

Investigations in the Field of Quinone. XXI. On the Structure of the Products Obtained by Condensation of Toluquinone and α -Naphthoquinone With Aceto-Acetic Esters

furfurane-3-carboxylic acid (XVIII), which was supported by further structured proofs. Thus the structure of the compounds obtained in the condensation of toluquinone and α -naphthoquinone with acetoacetic ester were determined and a number of substituted benzofurfuranes, benzodifurfuranes and naphthofurfuranes were synthesized. There are 13 references, 6 of which are Slavic.

ASSOCIATION: **Moscow State University**
(Moskovskiy gosudarstvennyy universitet)

SUBMITTED: December 20, 1956

AVAILABLE: Library of Congress

Card 3/3 1. Chemistry 2. Condensation reactions

79-1-10/63

Investigations in the Field of Quinone. XXI. On the Structure of the Products Obtained by Condensation of Toluquinone and α -Naphthoquinone With Acetoacetic Esters

-difurfurane-3,7-dicarboxylic acid (III) a quinone (IV) was obtained from that of benzodifurfurane. As far as this quinone is also formed in the oxidation of the derivative of benzodifurfurane obtained by the condensation of toluquinone with acetoacetic ester, it may with certainty be assumed that this compound represents (I) a diethylester of 2,4,6-trimethylbenzo-(1-2-b;4,5-b')-difurfurane-3,7-dicarboxylic acid. The structure formulae (III) and (IV) cannot be doubted. By the condensation of toluquinone with acetoacetic ester in alcohol-dissolved zinc chloride on slow addition of toluquinone the ethylester of 2,6-dimethyl 5-oxybenzodifurfurane-3-carboxylic acid (VI) with a melting point of 175°C is obtained (see formulae). Thus it is stated that in this manner the methyl group of toluquinone causes the entrance of the acetoacetic ester molecule into the para-position. The structure of formula (VI) is illustrated according to the given scheme (VII, VIII, IX and X). The reaction of α -naphthoquinone with acetoacetic ester, analogous to the given facts had to lead to the ethylester of 2-methyl-5-oxy- α -naphtho

Card 2/3

GRINEV, A. N.

72-1 12/63

AUTHORS: Grinev, A. N., Terent'ev, A. P.

TITLE: Investigations in the Field of Quinones. (Issledovaniya v oblasti khinonov) XXI. On the Structure of the Products Obtained by Condensation of Toluquinone and α -Naphthoquinone With Acetoacetic Ester (XXI. O stroenii veshchestv poluchennykh kondensatsiyey toluhina i α -naftokhina s atsetouksusnym efiro)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 1, pp.78-87 (USSR)

ABSTRACT: Graebe and Levy already found that the reaction of toluquinone with acetoacetic ester leads to two compounds with melting points of 173 and 122°C, but no further investigations on this were made. In an earlier paper the authors stated that the compound with a melting point of 122°C preferable is formed when the reaction is performed under a rapid addition of toluquinone to the mixture of acetoacetic ester, zinc chloride and alcohol on heating. Two possible structure formulae (I) and (II) may be assumed for this compound. In the oxidation of the diethyl ester of 2,6 dimethylbenzo-(1,2-b; 4,5-b').

Card 1/3

Investigations in the Field of Quinones. XX. The Production of Naphthoquinones and Dihydroanthraquinones 79-1-17/63

ASSOCIATION: **Moscow State University**
(Moskovskiy gosudarstvennyy universitet)

SUBMITTED: December 28, 1956

AVAILABLE: Library of Congress

Card 3/3

1. Chemistry 2. Hydroquinone-Isomerism

79-1-17/63

Investigations in the Field of Quinones. XX. The Production of Naphthoquinones and Dihydroanthraquinones

and (VI). It was determined that the isomerization takes place especially well on heating of the derivatives with acetic acid at boiling temperature. The oxidation of the hydroquinones (IV), (V), (VI) and quinones (VII), (VIII) and (IX) took place with the use of chromic acid. The synthesis of the derivatives (I), (II) and (III), their isomerization and the oxidation of the hydroquinones (IV), (V), (VI) took place without any liberation of intermediate products. The yields were good. For the synthesis of the p-quinones of the dihydronaphthalene series the authors had earlier used potassium bromate in an acid medium. With this very convenient oxidizing agent the fairly hard accessible dihydronaphthoquinones were obtained with almost quantitative yields. In the present work the authors under the same conditions with the aid of the same oxidizing agent synthesized three further naphthoquinones (X) and dihydroanthraquinones (XI), (XII)-quinone derivatives. There are 15 references, 5 of which are Slavic.

Card 2/3

GRINEV, A. N.

72-1-17/63

AUTHORS: Grinev, A. N. , Terent'ev, A. P.

TITLE: Investigations in the Field of Quinones (Issledovaniya v oblasti khinonov) XX. The Production of Naphthoquinones and Dihydroanthraquinones (XX. Pelucheniye naftokhinonov i digidroantrakhinonov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 1, pp.75-78(USSR)

ABSTRACT: The methods of the synthesis of p-naphthoquinones, based on the oxidation of 1-amino-4-oxynaphthalenes, 1,4-diaminonaphthalenes, naphthalene, 2-methylnaphthalene and others either lead to small yields of 1,4-naphthaquinones or they are not well applicable in the performance. The synthesis of 1,4-naphthoquinone (formula VII) and 2-methyl-1,4-naphthoquinone (VIII) was recently realized by the condensation of p-benzoquinone and toluquinone with divinyl (references 8 and 9). Although the reaction of p-quinone derivatives (I), (II) and (III) with divinyl gives almost quantitative yields, complications occur due to their isomerization to hydroquinones (IV), (V)

Card 1/3

ILLEGIBLE

GRINEV, N. K.

GRINEV, N. K.; PROKOPIYEVA, G. I., 20. 11. 1968. 1. 1.

Research on quinones. Part 11: Synthesis of substituted naphthoquinones.
Zhur.ob.khim. 27 no.6.1688-1690. 1968. (MRZ. 10:2)

L. I. Kostovskiy gosudarstvennyy universitet.
(Bamthofuran)

GRINEV, A.N.; VENETSEVA, N.A.; TIRENT'YEV, A.P.

Research in the field of quinones. Part 17: Reaction of 2,3-dichloroquinone with benzyl acetic ester. Zhur. ob. khim., no. 4:1090-1091 Apr '57. (MIRA 10:8)

1. Moskovskiy gosudarstvennyy universitet.
(Gulano)

GRINEV, A.M.; PAN, BEN-KHVAR; Terent'ev, A.P.

Synthesis of some N-alkyl substituted indoles. A. N. Grinev, N. B. Rodnitskiy and A. P. Terent'ev. *Ibid.* 1090-4. To an ice-cooled soln. of 10 g. p-benzoquinone in 36 ml. dry Me₂CO was added 18 g. MeC(NH₂Et):CHCO₂Et and after a spontaneous reaction the mixt. was heated 1.5 hrs. on a steam bath yielding 75% 1-ethyl-3-methyl-3-carbomethoxy-5-hydroxyindole, m. 184.5° (dioxane). This treated with Me₂SO in 2N NaOH gave 67% 1-ethyl-3-methyl-3-carbomethoxy-5-methoxyindole (I), m. 67° (MeOH), which refluxed 2 hrs. with 2N NaOH gave 1-ethyl-3-methyl-3-carbomethoxy-5-methoxyindole, m. 171° (EtOH). The same I formed on heating 2-methyl-3-carbomethoxy-5-methoxyindole with EtBr in EtONa-EtOH 1 hr. in 18% yield. Similarly naphthoquinone and MeC(NH₂Et):CHCO₂Et gave 57% 1-ethyl-3-methyl-3-carbomethoxy-5-hydroxybenzindole, m. 210°. Refluxing 59 g. H₂NCH₂CH₂CN with 86 g. AcCH₂CO₂Et 5 hrs. gave 91.5% MeC(NHCH₂CH₂CN):CHCO₂Et, m. 63°. This with p-benzoquinone in (CH₂Cl)₂ gave 48% 1-cyano-ethyl-3-methyl-3-carbomethoxy-5-hydroxyindole, m. 191°, which with Me₂SO-NaOH gave the 5-methoxy analog, m. 186°. This heated strongly with 50% NaOH 20 min. and distd. with steam at 280° gave 34% 1-methyl-3-carbomethoxy-5-methoxyindole, m. 207°. Heating 2.5 g. p-benzoquinone with 4 g. CH₃Ac-N-methylimine in (CH₂Cl)₂ 1 hr. gave 36% 1-methyl-3-acetyl-5-hydroxybenzofuran, m. 234-5°. The use of the N-ethylimine gave similarly 33.5% 1-methyl-3-acetyl-5-hydroxybenzofuran, m. 234°. G. M. Kosolapoff

9
2 May
8

3/3

PM

GRIYEV, A. N. PAN BOM KHVARI, Terent'ev, A. P.

$\text{BaCl}_2 \cdot \text{CO}_3\text{H}$ followed at $85-90^\circ$ by 11.1 g. 2,3-dichloro-6-benzoylquinone; after heating 0.5 hr. longer the mixt. yielded 8.2 g. solid product which on soln. in hot EtOH and cooling gave 1.8 g. of 2,3-dichloro-6-benzoylquinone (I, 2); 5.6 g. of mother liquor on cooling gave 4.1 g. of 2,3-dichloro-6-benzoylquinone (II); 1.6 g. of 2,3-dichloro-6-benzoylquinone (I), m. $168-70^\circ$ which gives a red color with FeCl_3 and a benzoylquinone in EtOH. The mother liquor from the original solid yielded 18.7 g. of 2,3-dichloro-6-benzoylquinone (II), m. 164° (EtOH). I with $\text{BaCl}_2 \cdot \text{CO}_3\text{H}$ and ZnCl_2 as above in 1 hr. gave II identical with the above. XVIII. Synthesis of substituted naphthoturans. A. N. Griyev, G. K. Prokof'ev, and A. P. Terent'ev, *Izd. 1952-3*; cf. C. A. 51, 78-495. Heating 0.5 g. ZnCl_2 , 0 ml. abs. EtOH, and 12 g. $\text{PrCOCH}_2\text{CO}_2\text{H}$ to 100° and adding 7.25 g. 2-naphthoquinone and heating 40 min. on a steam bath gave 77% 2-propyl-3-carbomethoxy-6-hydroxynaphthoturan (I), m. 164° (EtOH); this with alc. NaOH gave 100% 2-propyl-3-carbomethoxy-6-hydroxynaphthoturan, m. 240° . I with BaCl_2 in pyridine gave the 6-benzoyl analog, m. $110-12^\circ$. Similar use of $\text{Ac-PrCOCH}_2\text{CO}_2\text{H}$ gave 2-acetyl-3-carbomethoxy-6-hydroxynaphthoturan, m. $161-3^\circ$ (upholin). Similarly were prod. 76% 2-propyl-3-carbomethoxy-6-hydroxynaphthoturan, m. $240-1^\circ$ (PhNO), and 85% 2-methyl-3-carbomethoxy-6-hydroxynaphthoturan, m. 183° (from 1,2-dichloro-1,4-naphthoquinone); the latter hydrolyzed with alc. NaOH to the 3-carbomethoxy analog, decomp. 330° (AcOH), XIX.

9
2 May
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7/3

1. 2-methyl-5-hydroxybenzofuran (I).
 (100 g) of C. A. 81, 184082. In the neck of a Soxhlet ex-
 tractor there was refluxed 80 g. ZnCl₂, 40 ml. abs. EtOH, 60
 g. CH₃COCl, and 50 ml. dry Et₂O while the thimble was
 charged with 27 g. 2-nitrobenzoic acid. After 27 hrs. operation
 the thimble yielded a ppt. of 27 g. of 2-methyl-5-hydroxybenzofuran
 (I) in 10%. This (27 g.) in 3 ml.
 EtOH was treated with 1.1 g. HCl in the cold yielding
 after 4 hrs. 2.5 g. of 2-methyl-5-hydroxybenzofuran-3-car-
 boxylic acid (II). The free acid from I (C. A. 81, 78494)
 (87 g.) and 33.6 g. CaO heated in a tube in N₂ at 280-300°
 gave 83% 2-methyl-5-hydroxybenzofuran (II). b. 134°, m.
 85-86°; this with 2-nitrobenzoic acid in C₆H₆ forms a red cam-
 phor. C₁₂H₁₀O₄ m. 105-7°. II with Me₂SO in 10% NaOH
 gave 2-methyl-5-hydroxybenzofuran, b. 117-18°, n_D²⁰ 1.5072.
 II (1.1 g.) and 1.7 g. EtOH refluxed 1 hr. in 7 ml.
 abs. EtOH, m.p. 0-22°. No salt after heating the crude
 product briefly with 10% NaOH and acidifying 2 g. 2-
 methyl-5-hydroxybenzofuranic acid, m. 144-5°. II and
 SO₂Cl₂ in pyridine gave 2-methyl-3-nitrobenzofuran, m.
 170-1°. XVII. Reaction of 2,3-dichloroquinone
 with benzoylacetate. A. N. Orlov, N. K. Vengulova,
 and A. P. Terent'ev. *Izv.* 1090-1; cf. C. A. 50, 13800c.
 To 8.0 g. ZnCl₂ in 9 ml. dry EtOH was added 16.5 ml.

GRINEV A. N.

1. Synthesis of phenolones with
 2. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

G. M. Koshlanov

Rm

GRINEV, A.N.; TERENT'YEV, A.P.

Quinones. Vest. Mosk. un. Ser. mat. mekh. astron., fiz., khim. 12
no. 6:147-172 '57. (MIRA 11:10)

1. Kafedra spetsinteza Moskovskogo gosudarstvennogo universiteta.
(Quinone)

ILLEGIBLE

GRINEV, A.N.; VENEVTSEVA, N.K.; TEREENT'YEV, A.P.

Quinones. Part 14: The reaction of β -benzoquinone with β -nitro- and β -bromobenzoylacetic esters. Zhur. ob. khim. 26 no.10:2933-2934 0 '56. (MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Benzoquinone) (Acetic acid)

GRINEV, A.N.; TERENT'YEV, A.B.; TERENT'YEV, A.P.

Quinones. Part 13: The yield of endoethylnaphthofuran. Zhur. ob.
khim. 26 no.10:2931-2932 0 '56. (MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Furan) (Quinones)

Carine, A. H.; Ben Keraf, P.

III. (4) α - β -unsaturated ketone, m. 90-1° (from
ACOH). This with NaOH gave the free acid (II), m.
20-2° (from aq. HCl), which (2.4) treated with 15 ml.
2M NaOH and 5 ml. MeOH yielded 2.1 g. (45%) of II
m. 40-5° (from aq. HCl). AcOH/CO_2 raised (I) simi-
larly gave 0.7 g. (15%) of II, m. 24-5° (from HCl).
IV. Reaction of α -benzophenone with NaOH and p -
bromobenzoyl chloride. A. N. Ginter, N. K. Venkov-
ova, and A. K. Terentiev. *Ibid.* 2033-4; $-\text{ZnCl}_2$ (3.5 g.) in
6 ml. aq. HCl treated with 0.2 g. p - $\text{O}_2\text{NCH}_2\text{COCH}_2$
 COOH , then at 20-1° with 2.5 g. p -benzophenone (I), gave
10 ml. at 20-1° and a yellow ppt., 0.2 g. (1.5%) of p -
benzophenone, m. 44-5° (from aq. HCl).
V. The HCl from IV gave 0.2 g. yellow p - α -methyl-
 β -benzophenone, m. 20-1° (from aq. HCl). Simi-
larly, p - $\text{O}_2\text{NCH}_2\text{COCH}_2\text{COOH}$ and I gave a small amt. of
yellow, 0.2 g. (1.5%) of p -benzophenone, m. 44-5° (from
aq. HCl). α - β -unsaturated ketone, m. 90-1° and a moderate yield of
the β -keto acid of II, m. 170-1°.

G. M. Knapp

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pm MT

GRINEL, A. N.

Reaction of α -Benzoylbenzylamine with α -Benzoylbenzylamine, α -Benzoylbenzylamine, and α -Benzoylbenzylamine

1974-1975

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mp. 100-101°C. $\text{C}_{10}\text{H}_{10}\text{O}_2$ (162.17). IR (KBr): 1710 (C=O), 1640 (C=C), 1600 (C=C), 1580 (C=C), 1540 (C=C), 1520 (C=C), 1500 (C=C), 1480 (C=C), 1460 (C=C), 1440 (C=C), 1420 (C=C), 1400 (C=C), 1380 (C=C), 1360 (C=C), 1340 (C=C), 1320 (C=C), 1300 (C=C), 1280 (C=C), 1260 (C=C), 1240 (C=C), 1220 (C=C), 1200 (C=C), 1180 (C=C), 1160 (C=C), 1140 (C=C), 1120 (C=C), 1100 (C=C), 1080 (C=C), 1060 (C=C), 1040 (C=C), 1020 (C=C), 1000 (C=C), 980 (C=C), 960 (C=C), 940 (C=C), 920 (C=C), 900 (C=C), 880 (C=C), 860 (C=C), 840 (C=C), 820 (C=C), 800 (C=C), 780 (C=C), 760 (C=C), 740 (C=C), 720 (C=C), 700 (C=C), 680 (C=C), 660 (C=C), 640 (C=C), 620 (C=C), 600 (C=C), 580 (C=C), 560 (C=C), 540 (C=C), 520 (C=C), 500 (C=C), 480 (C=C), 460 (C=C), 440 (C=C), 420 (C=C), 400 (C=C), 380 (C=C), 360 (C=C), 340 (C=C), 320 (C=C), 300 (C=C), 280 (C=C), 260 (C=C), 240 (C=C), 220 (C=C), 200 (C=C), 180 (C=C), 160 (C=C), 140 (C=C), 120 (C=C), 100 (C=C), 80 (C=C), 60 (C=C), 40 (C=C), 20 (C=C), 0 (C=C). ^1H NMR (CDCl₃): δ 7.2 (d, 2H, H_A), 6.8 (d, 2H, H_B), 6.4 (t, 2H, H_C), 6.0 (t, 2H, H_D), 5.6 (t, 2H, H_E), 5.2 (t, 2H, H_F), 4.8 (t, 2H, H_G), 4.4 (t, 2H, H_H), 4.0 (t, 2H, H_I), 3.6 (t, 2H, H_J), 3.2 (t, 2H, H_K), 2.8 (t, 2H, H_L), 2.4 (t, 2H, H_M), 2.0 (t, 2H, H_N), 1.6 (t, 2H, H_O), 1.2 (t, 2H, H_P), 0.8 (t, 2H, H_Q), 0.4 (t, 2H, H_R), 0.0 (t, 2H, H_S). MS (m/z): 162 (M⁺), 146 (M⁺-16), 130 (M⁺-32), 114 (M⁺-48), 98 (M⁺-64), 82 (M⁺-80), 66 (M⁺-96), 50 (M⁺-112), 34 (M⁺-128), 18 (M⁺-144), 10 (M⁺-160).

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[illegible]

1931-2 (1956). S.

D.A. 50, 100, 200, 400, 800, 1600, 3200, 6400, 12,800, 25,600, 51,200, 102,400, 204,800, 409,600, 819,200, 1638,400, 3276,800, 6553,600, 13,107,200, 26,214,400, 52,428,800, 104,857,600, 209,715,200, 419,430,400, 838,860,800, 1677,721,600, 3355,443,200, 6710,886,400, 13,421,772,800, 26,843,545,600, 53,687,091,200, 107,374,182,400, 214,748,364,800, 429,496,729,600, 858,993,459,200, 1,717,986,918,400, 3,435,973,836,800, 6,871,947,673,600, 13,743,895,347,200, 27,487,790,694,400, 54,975,581,388,800, 109,951,162,777,600, 219,902,325,555,200, 439,804,651,110,400, 879,609,302,220,800, 1,759,218,604,441,600, 3,518,437,208,883,200, 7,036,874,417,766,400, 14,073,748,835,532,800, 28,147,497,671,065,600, 56,294,995,342,131,200, 112,589,990,684,262,400, 225,179,981,368,524,800, 450,359,962,737,049,600, 900,719,925,474,099,200, 1,801,439,850,948,198,400, 3,602,879,701,896,396,800, 7,205,759,403,792,793,600, 14,411,518,807,585,587,200, 28,823,037,615,171,174,400, 57,646,075,230,342,348,800, 115,292,150,460,684,697,600, 230,584,300,921,369,395,200, 461,168,601,842,738,790,400, 922,337,203,685,477,580,800, 1,844,674,407,370,955,161,600, 3,689,348,814,741,910,323,200, 7,378,697,629,483,820,646,400, 14,757,395,258,967,641,292,800, 29,514,790,517,935,282,585,600, 59,029,581,035,870,565,171,200, 118,059,162,071,741,130,342,400, 236,118,324,143,482,260,684,800, 472,236,648,286,964,521,369,600, 944,473,296,573,929,042,739,200, 1,888,946,593,147,858,085,478,400, 3,777,893,186,295,716,170,956,800, 7,555,786,372,591,432,341,913,600, 15,111,572,745,182,864,683,827,200, 30,223,145,490,365,733,367,654,400, 60,446,290,980,731,466,735,308,800, 120,892,581,961,462,933,470,617,600, 241,785,163,922,925,866,941,235,200, 483,570,327,845,851,733,882,470,400, 967,140,655,691,703,467,764,940,800, 1,934,281,311,383,406,935,529,921,600, 3,868,562,622,766,813,871,059,843,200, 7,737,125,245,533,627,742,119,686,400, 15,474,250,491,067,255,484,239,372,800, 30,948,500,982,134,510,968,468,745,600, 61,897,001,964,269,021,937,931,200, 123,794,003,928,538,043,875,862,400, 247,588,007,857,076,087,751,724,800, 495,176,015,714,152,175,503,449,600, 990,352,031,428,304,351,006,899,200, 1,980,704,062,856,608,702,013,798,400, 3,961,408,125,713,217,404,027,596,800, 7,922,816,251,426,434,808,055,193,600, 15,845,632,502,852,869,616,110,387,200, 31,691,265,005,705,739,232,220,774,400, 63,382,530,011,411,478,464,441,548,800, 126,765,060,022,822,956,928,883,097,600, 253,530,120,045,645,913,857,776,195,200, 507,060,240,091,291,827,715,552,390,400, 1,014,120,480,182,583,655,431,104,780,800, 2,028,240,960,365,167,310,862,209,561,600, 4,056,481,920,730,334,621,724,419,123,200, 8,112,963,841,460,669,243,448,838,246,400, 16,225,927,682,921,338,486,897,676,492,800, 32,451,855,365,842,676,973,795,352,985,600, 64,903,710,731,685,353,947,590,705,971,200, 129,807,421,463,370,707,895,181,411,942,400, 259,614,842,926,741,415,791,362,823,884,800, 519,229,685,853,482,831,582,725,647,769,600, 1,038,459,371,706,965,663,165,451,295,539,200, 2,076,918,743,413,931,326,330,902,591,078,400, 4,153,837,486,827,862,652,661,805,182,156,800, 8,307,674,973,655,725,305,323,364,364,313,600, 16,615,349,947,311,450,610,646,728,728,627,200, 33,230,699,894,622,901,221,293,457,457,254,400, 66,461,399,789,245,802,442,584,914,914,508,800, 132,922,799,578,491,604,885,169,829,829,017,600, 265,845,599,156,983,209,770,339,659,659,035,200, 531,691,198,313,966,419,540,679,319,319,070,400, 1,063,382,396,627,932,839,081,358,638,638,040,800, 2,126,764,793,255,865,678,162,717,277,277,081,600, 4,253,529,586,511,731,356,325,434,554,554,163,200, 8,507,059,173,023,462,712,650,869,109,109,326,400, 17,014,118,346,046,925,453,301,738,218,218,652,800, 34,028,236,692,093,850,906,603,476,436,437,305,600, 68,056,473,384,187,701,813,206,952,872,874,611,200, 136,112,946,768,375,403,626,412,905,745,749,222,400, 272,225,893,536,750,807,252,825,811,491,498,444,800, 544,451,787,073,501,614,505,651,622,982,996,889,600, 1,088,903,574,147,003,229,011,303,245,965,993,779,200, 2,177,807,148,294,006,458,022,606,491,931,987,558,400, 4,355,614,296,588,01

anthraquinone over 3-5 min., and heated on a water bath at 40-50° yielded 63% 5,3,2-HO(EtO)C

1990

GRINEV, A. N.

Quinones. X. Reaction of acetylacetone imine with p-
benzoquinone. A. N. Grinev, V. I. Shvedov, and A. P.
Grinev. *Dokl. Akad. Nauk S.S.S.R.* 26, 1620-81 (1958).
(English translation). XI. Synthesis of some sub-
stituted indoles. *Ibid.* 1633-4. See C.A. 50, 14710v.
R.M.R.

PM

GRINEV, A.N.; SHVEDOV, V.I.; TERENT'YEV, A.P.

Research in the field of quinones. Part 11. Synthesis of certain substituted indoles. Zhur.ob.khim.26 no.5:1452-1453 My '56.

1.Moskovskiy gosudarstvennyy universitet.
(Indole)

(MLRA 9:9)

A. M. Grinev, V. I. Shredov
 yellow compd., m. 180°. From 0.2 g. Na in 200 ml. abs.
 EtOH, excess EtOH was evapd., and residue dissd. with 200
 ml. PhClOH, 400 ml. CCl₄, and 0.2 g. I₂, and heated to
 give 60 g. cyclohexanone-2-carboxylic acid benzyl ester
 (XXII), b.p. 160-3°. XXII treated with XII gave a yellow
 oil, which formed a semicarbazone, C₁₂H₁₅O₄N₃, m. 204°.
 John E. Miller

P. 12

PM

for

GRINEV A.N.

Reaction of acetylation with
 1-methyl-5-methoxyindole (XII) and 0.88 g. HCO_2Et in 5 ml.
 abs. EtOH added to a warm soln. of 0.3 g. Na in 10 ml. abs.
 EtOH and the aq. layer acidified gave 900 mg. 1-methyl-3-
 formyl-5-methoxyindole (XIII), m. 219° . XIII (5 g.) and
 10 ml. pure SOCl_2 heated to 80° give after evapn. and
 crystn. from EtOH 3 g. 1-methyl-3-chloromethylene-5-meth-
 oxyindole (XIV), m. 110° . 5-Methoxy-1-methyl-3-(1-car-
 bethoxy-2-oxocyclohexyl)methylene-5-methoxyindole (XV), obtained by
 similar condensation to IV from XIV and II, m. 103° ;
 semicarbazone, m. 183° . XV (0.2 g.) is cyclized by warming
 with 2 ml. 90% H_2SO_4 2 min. on steam bath. Evolution of
 CO_2 occurs. After treatment with ice and soln. in EtOAc
 160 mg. yellow needles, m. $132-9^\circ$, of 1-methyl-4,5-tetra-
 methylene-5-methoxycyclohexylidene-5-methoxyindole (XVI) is obtained. XV
 was isomerized with 4 ml. 35% HBr soln. in AcOH to a
 compd., m. 128° ; semicarbazone, m. $216-18^\circ$. XII (5 g.) in
 70 ml. EtOH, 0.71 g. Na in 40 ml. EtOH, and 3.6 ml. Ph-
 CH_2Cl refluxed 2 hrs. gave 3 g. 1-methyl-5-benzoyloxyindole
 (XVII), m. $115-17^\circ$. With excess PhCH_2Cl 1-methyl-3-
 benzyl-5-benzoyloxyindole (XVIII), m. 155° , is formed.
 XII (5 g.) refluxed with 25 ml. AcO and a few drops of
 POCl_3 and the soln. evapd. gives 2.8 g. 1-methyl-5-acetoxy-
 indole (XIX), m. 105° . XI (5 g.) refluxed with 25 ml.
 Ac_2O and 0.3 g. HCO_2Et , gives 1.3 g. 1-methyl-3-ethoxy-
 methylene-5-acetoxyindole (XX), m. 154° . XX (500 mg.)
 treated with HCl gives 100 mg. 1-methyl-3-ethoxymethylene-5-
 hydroxyindole (XXI), m. 185° . Condensation of 2 g.
 XII with 2.65 g. $\text{AcNHCH}(\text{CO}_2\text{Et})$ and 0.4 g. K in 10 ml.
 tert-BuOH gives probably 3-(2,2-dicarboethoxy-2-acetamido-
 ethylidene)-1-methyl-5-methoxyindole, m. 111° , and a

1/2

GRINEY, A. N.

7
Oxidation of 5,8-endothyrans-1,4-naph-
thalene with hydrogen chloride and acetoacetic ester. 3
A. N. Griney, A. B. Krasov, and A. P. Terent'ev. J.
Gen. Chem. U.S.S.R. 36: 837-9 (1966) (English translation).
See C.A. 60: 14710d
H. M. B.

em

GRINEV, A.N.; TERENT'YEV, A.B.; TERENT'YEV, A.P.

Research in the field of quinones. Part 9. Interaction of 5,8-
-endoethylene-1,4-naphthoquinone with hydrogen chloride and ethyl
acetoacetate. Zhur.ob.khim. 26 no.3:730-732 Mr '56. (MLRA 9:8)

1. Moskovskiy gosudarstvennyy universitet.
(Naphthoquinone) (Hydrochloric acid) (Acetoacetic acid)

GRINEV, A.N.; BON-KHVAR, Pan.; FROSIN, V.N.; TEREENT'YEV, A.P. •

Research in the field of quinones. Part 8. Condensation of chloro- and 2,3-dichloro-*p*-benzoquinone with acetoacetic and benzoylacetic esters. Zhur.ob.khim. 26 no.2:561-564 F '56. (MLRA 9:8)

1. Moskovskiy gosudarstvennyy universitet.
(Benzoquinone) (Acetic acid)

GRINEV, A.N.; TERENT'YEV, A.B.; TERENT'YEV, A.P.

Research in the field of quinones. Part 7. Synthesis of certain quinones from the dihydro- and tetrahydronaphthalene series by the oxidation of the corresponding hydroquinones with potassium bromate. Zhur.ob.khim. 26 no.2:560-561 F '56. (MLRA 9:8)

1. Moskovskiy gosudarstvennyy universitet.
(Quinones) (Naphthalene)

GRINEV, A.N.; PAN BONG-HWAL; TERENT'YEV, A.P.

Preparation of benzodifuran and benzofuran derivatives by using the interaction of n-benzoquinone and toluquinone with benzoyl ethyl acetate. Vest.Mosk.un.11 no.2:91-93 F '56. (MLRA 9:8)

1. Laboratoriya imeni akademika S.S. Nametkina.
(Benzofuran) (Benzodifuran)

GRINEV A.N.

Quinones. VI. Preparation of chloro- and bromo-quinones by oxidation of chloro- or bromo-substituted hydroquinones. A. N. Grinev and A. P. Terent'ev (State Univ., Moscow). *Zh. Obshchei Khim.* 25, 2145-6 (1955); cf. *C.A.* 49, 12353c; 50, 4903g. --To 30 g. chlorohydroquinone in 180 ml. H₂O was added 15 ml. N H₂SO₄ and 12.6 g. KBrO₃ in 120 ml. H₂O; stirring at 60-2° until the oily layer turned yellow, gave 87.5% chloro-*p*-benzoquinone, m. 56-7°. Addn. of 2.5 ml. N H₂SO₄ and 2.1 g. KBrO₃ in 20 ml. H₂O to 6 g. 2,5-dichlorohydroquinone in 70 ml. H₂O and 20 ml. dioxane, at 70-5° gave similarly 94% 2,5-di-chloro-*p*-benzoquinone, m. 159-60°. Similarly 85-90% yields of bromo-, 2,3-dichloro- and 2,6-dibromoquinones were obtained.

G. M. Kosolapoff

GRINEV, A. N.

5

Quinone series. V. Synthesis of some substituted indoles and benzindoles. A. N. Grinev, N. K. Kul'bovskaya, and A. P. Terent'ev (Moscow State Univ.). *Zhur. Obshchei Khim.* 28, 1355-7 (1955); cf. *C.A.* 49, 13950g; 50, 3884e. Heating 27.5 g. *p*-benzoquinone and 65 g. $\text{MeC}(\text{NH}_2)\text{CHCO}_2\text{Et}$ in Me_2CO 2 hrs. at reflux gave 30% *Et* 2-methyl-5-hydroxyindole-3-carboxylate, m. 205°. The use of 1,4-naphthoquinone gave 56% *Et* 1H-2-methyl-5-hydroxybenz[*g*]indole-3-carboxylate, m. 204-5°. Chloro-*p*-benzoquinone gave 16.5% *Et* *z*-chloro-2-methyl-5-hydroxyindole-3-carboxylate, m. 213° (from Me_2CO). Similarly, 1.55 g. *p*-benzoquinone, 4.1 g. $\text{MeC}(\text{NHMe})\text{CHCO}_2\text{Et}$ in Me_2CO gave 48% *Et* 1,2-dimethyl-5-hydroxyindole-3-carboxylate, m. 207-8° (from Me_2CO), while 1,4-benzoquinone in this case gave 51% *Et* 1H-1,2-dimethyl-5-hydroxybenz[*g*]indole-3-carboxylate, m. 279-80° (from Me_2CO). G. M. Kosolapoff.

1

GRINEV, A.N.; FROSIN, V.N.; TEREENT'YEV, A.P.

Investigation in the field of quinones. Part 4. Synthesis
of substituted naphthofurans. Zhur.ob.khim. 25 no.3:523-526
Mr '55 (MLRA 8:6)

1. Moskovskiy Gosudarstvennyy universitet
(Naphthofuran)

GRINEV, A. N.

62 ✓ Quinones. III. Synthesis of substituted benzodifurans by the reaction of *p*-benzoquinone and toluquinone with acetoacetic ester. A. P. Terent'ev, A. N. Grinev, and Pan Bon-Khvar (Moscow State Univ.). *Zhur. Obshch. Khim.* 24, 2050-1 (1954); cf. *C.A.* 49, 12353c. — To 28 g. ZnCl_2 in 28 g. abs. EtOH was added 39 g. $\text{AcCH}_2\text{CO}_2\text{Et}$, followed by addn. over 5-10 min. with external heating of 21 g. *p*-benzoquinone. After stirring 45 min. on a steam bath and standing several hrs. at room temp. the mixt. yielded 70% *di*-*2,6*-dimethylbenzo[1,2-*b*, 4,5-*b'*]difuran-3,7-dicarboxylate, m. 184°, while the mother liquor gave 4.5 g. benzofuran deriv., m. 137° (cf. Pechmann, *Ber.* 21, 3006 (1888); Braebe and Levy, *Ann.* 283, 245 (1894)). Hydrolysis of the above ester with alc. NaOH gave the free dicarboxylic acid, which (2 g.) heated with 4.5 g. quinoline and 0.1 g. CuO 2 hrs. at 240-2° gave 1.2 g. pure *2,6*-dimethylbenzo[1,2-*b*, 4,5-*b'*]difuran, m. 113-14° (from EtOH). Similar reaction of toluquinone with $\text{AcCH}_2\text{CO}_2\text{Et}$ gave 60% *di*-*2,4,6*-trimethylbenzo[1,2-*b*, 4,5-*b'*]difuran-3,7-dicarboxylate, m. 120-3°, along with 1 g. benzofuran deriv., m. 173° (cf. above refs.). Hydrolysis of the ester gave the free acid which heated with quinoline and CuO as above gave from 0.7 g. acid 0.3 g.

2,4,6-trimethylbenzo[1,2-*b*, 4,5-*b'*]difuran, m. 70-1.5° (from EtOH). G. M. Kosolapoff

(2)

Grinev, A. N.

Quinones. III. Synthesis of substituted benzodifurans
by the reaction of *p*-benzoquinone and toluene with
acetoacetic ester. A. P. Terent'ev, A. N. Grinev, and Pan'kova
Bon-Khvat. *J. Gen. Chem. U.S.S.R.* 24, 2015-16 (1951)
(Engl. translation).—See C.A. 49, 13959g. H. M. R.

3

PM

GRINEV, A. N.

USSR/ Chemistry Synthesis methods

Card : 1/1 Pub. 151 - 25/33

Authors : Terentyev, A. P., Grinev, A. N., and Terentyev, A. B.

Title : Investigation of quinones. Part 2.- Synthesis of chloro- and bromo-substituted hydroquinones by the reaction of HBr and HCl ester solutions with quinones

Periodical : Zhur. ob. khim. 24/8, 1433 - 1435, August 1954

Abstract : A new method for the synthesis of Cl- and Br-hydroquinones as a product of reaction between quinones and HBr- and HCl- ester solutions, is presented. Various results obtained through the application of the new synthesis method, are shown in table. Thirteen references: 7 German; 5 USA and 1 Polish (1844 - 1950).

Institution : State University, Moscow

Submitted : March 8, 1954

GRINEV, A. N.

USSR/Chemistry - Sulfonation

Card : 1/1

Authors : Terentyev, A. P., and Grinev, A. N.

Title : Investigation of quinones. Part 1. - Sulfonation of quinones

Periodical : Zhur. Ob. Khim., 24, Ed. 6, 1049 - 1058, June 1954

Abstract : Typical quinones, which submit to intensive resinification during the effect of conventional sulfonating agents, were thoroughly sulfonated with dioxanesulfonic trioxide. Sulfonation of p-benzoquinones results in formation of oxyhydroquinone-sulfonic and oxyhydroquinonedisulfonic acids; sulfonation of toluquinone brings methyloxyhydroquinone-sulfonic and methyloxyhydroquinone-disulfonic acids; acids obtained from sulfonation of other quinone compounds are described. Sulfonation proceeds through the intermediate formation of dioxanesulfonic trioxide. Twenty-one references; 1 Russian since 1838, German since 1860. Graph.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : December 3, 1953

GRINAY, A. N.

GRINAY, A. N. - "Sulfonation of of Quinones." Sub 3 Oct 52, Moscow Order of Lenin State U imeni N. V. Lomonosov. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechnaya Moskva January-December 1952

TERENT'YEV, A. P.; GRINEV, A. N.

Sulfonation

Quinone sulphonation.

Dokl. AN SSSR 81 no. 4, 1951

Laboratoriya Spetsial'nogo Sintez i Analiza im SS
Nemetkina; Moskovskogo Gosudarstvennogo Universiteta

im M. V. Lomonosova

Rcd. 8 Oct. 1951

SO: Monthly List of Russian Accessions, Library of Congress, May 1952 /1952/, Uncl.

L 14150-66
ACC NR: AP6001319

sure of irradiated rats not previously treated with one of the protective agents tended to drop. The author conjectures that irradiation disrupts the mechanisms by which the 5-hydroxyindole derivatives participate in the hypotensive effect. Orig. art. has: 2 figures, 1 table.

SUB CODE: 06/ SUBM DATE: 05Jun65/ ORIG REF: 005/ OTH REF: 000

Card 2/2 *so*

I 14150-66 EWT(m)

ACC NR: AP6001319

SOURCE CODE: UR/0248/65/000/009/0055/0058

AUTHOR: Grinev, A. N.; Il'yuchenok, T. Yu.; Lepekhin, V. P.; Shadurskiy, K. S.

ORG: Institute of Medical Radiology, AMN SSSR, Obninsk (Institut meditsinskoy radiologii AMN SSSR)

TITLE: Loss of hypotensive activity by 5-hydroxyindole derivatives in irradiated animals

SOURCE: AMN SSSR. Vestnik, no. 9, 1965, 55-58

TOPIC TAGS: serotonin, radiation drug, radioprotective agent

ABSTRACT: A hypotension lasting from 32 to 77 days following administration of eighteen indole derivatives was established in rats of the August strain. Preliminary exposure of the animals to 300 or 600 rads of external radiation altered the hypotensive effect of the drugs considerably. A 300 rad dose increased the latent period, i. e., the time that hypotension set in, and shortened the duration of the effect of compound ORF-50. The hypotensive effect was induced after a 600 rad dose, and the blood pressure remained steady and within normal limits. The blood pres-

Card 1/2

UDC: 615.7-092.259 : 617-001.28

VINOGRADOVA, Ye.V.; GRINEV, A.N.; DANUSEVICH, I.K.; DZIK, M.F.; DUBOVIK, B.V.;
ZAKHAREVSKIY, A.S.; IL'YUCHENOK, T.Yu.; KOST, A.N.; MARTINOVICH, G.I.;
MIKLEVICH, A.V.; PIL'TIYENKO, L.F.; RACHKOVSKAYA, I.V.; REUT, N.A.;
TALAPIN, V.I.; TAMARINA, N.Z.; TEREENT'YEV, A.P.; SHADURSKIY, K.S.

Research on pharmacological agents with prolonged hypotensive
action. Vest. AMN S SSR 18 no.1:69-86 '63. (MIRA 16:2)

1. Laboratoriya spetsial'nogo organicheskogo sinteza khimicheskogo
fakul'teta Moskovskogo gosudarstvennogo universiteta imeni Lomono-
sova i kafedra farmakologii Minskogo meditsinskogo instituta.
(HYPOTENSION) (INDOLE)

GRINEV, A.N.; VENEVTSEVA, N.K.

Aminomethyl and aminocethyl derivatives of 5-methoxybenzofuran.
Zhur. ob. khim. 33 no.5:1436-1442 My '63. (MIRA 16:6)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.
(Benzofuran) (Amino group)

GRINEV, A.F.; SLEPENKO, D.D.

Machine for checking the rate of tightness of tapered thread
in couplings. Mashinostroenie no.3:74-78 My-Je '63.

(MIRA 10:7)

(Screw threads--Testing)

- USSR/Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae. R-1

Abs Jour : Ref Zhur-Biol., No 20, 92689

decomposition products of microorganic animal and plant proteins] according to I. I. Kuzrskiy's method. The most effective vaccines proved to be those with a protracted period of inactivation. After vaccination with inactivated virus, the animals acquired immunity which in its intensity was not inferior to the immunity acquired when the disease runs its natural course. Virus inactivated with ASD-P2 can be used on farms at the first appearance of the foot-and-mouth disease for the purpose of inducing it in the animals in its wilder form.

Card : 2/2

GRINETS, M. N.

USSR/Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae. R-1

Abs Jour : Ref Zhur-Biol., No 20, 1950, 92689

Author : Grinets, I. G., Grinets, N. N.
Inst : Altayskiy Kray Scientific Research Veterinary Station.

Title : Vaccination Against Foot-and-Mouth Disease with Virus Inactivated with ASD-F2 Preparation.

Orig Pub : Sb. nauchn. rabot Altaysk. krayevoy n.-i. vet. st., 1957, vyp. 1, 44-49

Abstract : The virus of the foot-and-mouth disease was inactivated during 1-3 days with ASD-F2 preparation [Dorogov's antiseptic stimulant - a biogenic stimulator prepared from

Card : 1/2

GRINETS, I. G.

USSR/Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae. Vol. 1

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92689

Author : Grinets, I. G., Grinets, N. K.
Inst : Altayskiy Kray Scientific Research Veterinary Station.
Title : Vaccination Against Foot-and-Mouth Disease with Virus Inactivated with ASD-F2 Preparation.

Orig Pub : Sb. nauchn. rabot Altaysk. krayevoy n.-i. vet. sh., 1957, vyp. 1, 46-49

Abstract : The virus of the foot-and-mouth disease was inactivated during 1-6 days with ASD-F2 preparation [Doregov's antiseptic stimulant - a biogenic stimulator prepared from

Card : 1/2

USSR / Diseases of Farm Animals. Diseases Caused by Viruses
and Rickettsiae.

R

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7445
Author : Grinets, I. G.
Inst : Altay Kray Scientific Research Veterinary Station
Title : The Therapy of Complications Involving the
Extremities and the Udder in Foot-and-Mouth-Disease
Orig Pub : Sb. nauchn. rabot Altaysk. krayevoy. n.-i. st., 1957,
vyp 1, 40-45
Abstract : For the treatment of complications which involve the
extremities in foot-and-mouth-disease the author
recommends the ASD f. 3 preparation in undiluted form
or in the form of a 2 percent ointment, and for
complications affecting the udder, a penicillin
ointment

Card 1/1

USSR / Diseases of Farm Animals. Diseases Caused by
Viruses and Rickettsiae.

R-2

Abs Jour : Ref Zhur - Biol., No. 17, 1958, No. 78923

Author : Grinets, I. G.

Inst : Altay Kray Scientific Scientific Research Veterinary
Station.

Title : Test of Immunization of Cattle With a Subinnoculated
Virus of Hoof-and-Mouth Disease.

Orig Pub : Sb. nauchn. rabot Altaysk. krayevoy n.-i. vet. st.,
1957, vyp. 1, 35-39.

Abstract : A subinnoculation of virus of hoof-and-mouth disease ob-
tained from a herd in which hoof-and-mouth disease
occurred in a generalized form, with up to a 10% loss
of animals, was conducted on guinea pigs. The subinno-
culation of the field virus of hoof-and-mouth disease
strengthened its pathogenic properties for the guinea

Card 1/2

GRINETS, I.G.

SMIRNOV, S.I.; GRINETS, I.G., Post Graduate Student
Dept. of Special Pathology and Therapy, Troitsk Veterinary Institute
"Some data on mycotic feed toxicosis of horses."
SO: Vet. 24 (6) 1947, p. 34

USSR/Virology - The Virus of Foot-and-Mouth Disease.

E.

Abs Jour : Ref Zhur - Biol., No 19, 1958, 85828

Author : Grinets, I.G.

Inst : The Altayskiy Kray Scientific Research Veterinary Station

Title : The Problem of the Live Virus Carrier State in Foot-and-Mouth Disease.

Orig Pub : Sb. Nauchn. Rabot Altaysk. Krayevoy N.-I. Vet. St., 1957, No 1, 32-34

Abstract : On the basis of an analysis of 3 cases, the author feels that the virus carrier state may continue for 6 to 7 months after discontinuation of quarantine. Infection occurs only upon contact with animals recovering from the disease. The virus is passed through the recovered animals, whereupon its virulence is enhanced and the disease becomes more severe. -- From the author's summary.

Card 1/1

SHISHKIN, I.I.; YESHOV, F.T.; BOROVILOV, B.P.; LEBKHOV, V.S.;
GRININ, Ya., red.

[Ways of reducing losses of metallic supports in mines of
the "Vorkutugol" Combine] Puti snizheniia poter' metalli-
cheskoi krep' na shakhtakh kombinata Vorkutugol'. Svytyvkar,
Komi knizhnoe izd-vo, 1964. 40 p. (p. 18-19)

EE II, 1.

"Description of the ...
1954-1955." ... (... Vol. 3, no. 3, March 1954. ...)

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Encl.

GRINER, T.

"The importance of triangular signs in hyperplasia of the thymus." p. 283.
(VOJNOSANITETSKI PREGLED. MILITARY-MEDICAL REVIEW, Vol. 9, no. 9/10, Sept/Oct 1952,
Beograd, Yugoslavia)

SO: Monthly List of East European Accession, Vol. 2, #8, Library of Congress
August, 1953, Uncl.

SAVENKOV, V.Ya., kand.tekhn.nauk; DOLZHENKOV, I.Ye., kand.tekhn.nauk;
GRINER, R.I., inzh.

Electric tempering in the heat treatment of cultivator
blades. Trudy Inst.chern.met.AN URSR no.14:95-99 '61.
(MIRA 14:10)

(Steel--Heat treatment) (Induction heating)

SHVYDKIY, M.Ya.; GRINER, M.K.; BEVZ, A.N.; MEFODOVSKIY, V.Ya.

Make fuller use of the capacity of rotary kilns. TSement 28 no.6:
3-5 N-D '62. (MIRA 15:12)

1. Yuzhgiprotsement i Nikolayevskiy tsementnyy zavod.
(Kilns, Rotary)

GRINER, I.K., Inzh.; BULYANIKY, A.V., Inzh.; KORDILOVICH, V.M., Inzh.

Overall intensification of the process of roasting chickens in
rotary kilns measuring 4.5 x 1.0 m. Document 31 no. 1019-17
N-D '65. (MIRA 18:17)

1. Vsesoyuznyy institut po proyektirovaniyu i konstruirovaniyu
tekhniko-razrabotka "Yuzhnyy protsekt".

SHVYDKIY, M.Ya.; GRINER, L.K.

Study of the operation and management of the 4.5 x 170m. rotary kiln
at the Balgorod Cement Plant. Trudy Ikhigiprotektsiya no. 5:23-32 '63.
(MIRA 17:12)

VAL'EERG, G.S.; SHVYDKIY, M.Ya.; GRINER, I.K.

Study of the operation of rotary kilns at the Nikolayev Cement Plant.
Trudy IUzhkiprotssementa no.5:3-22 '63. (MIRA 17:12)

GRINER, B.M.; GRINKEVICH, N.I.; IGNAT'YEVA, N.S.; KAZ'MINA, L.P.

Color of leaves as an index of the content of tanning
substances in plants. Biul. Glav. bot. sada no. 53:72-75
'64. (MIRA 17:6)

1. Botanicheskiy sad Pervogo moskovskogo meditsinskogo
instituta imeni Sechenova.

GRINER, B.M.

Arboretum in fall. Biul.Glav.bot.sada no. 48:32-39 '63.
(MIRA 17:5)

1. Botanicheskiy sad Pervogo Moskovskogo meditsinskogo instituta.

GRINER, Boris Matveyevich; KUDRYAVTSEV, M.A., red.; RAYKO, N.Yu., tekhn.
red.

[Trees and shrubs suitable for outdoor growing in the European part
of the U.S.S.R.; manual for students] Derev'ia i kustarniki, prigodnye
dlia vyrashchivaniia v otkrytom grunte Evropeiskoi chasti SSSR; spra-
vochnik dlia studentov. Moskva, I-i Mosk. med. in-t, 1960. 127 p.
(MIRA 14:7)

(Trees)

(Shrubs)

AUTHOR: Griner, B.M. (Moscow) 007-26-53-8-46/51

TITLE: On the Care of Plants **Indoors** (O vospitanii rasteniy v komnatakh)

PERIODICAL: Priroda, 1958, Nr 8, pp 122-123 (USSR)

ABSTRACT: This is review of the book "Kul'tura oranzhereyno-komnatnykh rasteniy" (The Culture of Greenhouse and Indoor Plants) by I.Ye. Karneyev, published by the Sel'khozgiz publishing house in 1957, 558 pp.

1. Plants--Growth--USSR

Card 1/1

GRINER, B.M.

Botanical garden of medical plants. Priroda 46 no.6:53-56 Je '57.
(MLRA 10:7)

1. Moskovskiy farmatsevticheskiy institut.
(Botany, Medical) (Moscow--Botanical gardens)

USSR/ Biology - Botany

Card 1/1 : Pub. 86 - 28/35

Authors : Griner, B. M.

Title : The climbing "Kobeya"

Periodical : Priroda 44/2, 117 - 118, Feb 1955

Abstract : A detailed description is given of the botanical characteristics of a flowering liana called the "Kobeya", with directions for growing the plant. Illustrations.

Institution : Botanical Garden of the Moscow Pharmaceutical Institute

Submitted :

GRINER, B.M.

Results of combating quack grass in orchards and parks. Biul.Glav.bot.
sada no.20:131-134 '55. (MLRA 8:9)

1. Botanicheskiy sad Moskovskogo farmatsevticheskogo instituta.
(Quack grass)

GRINER, B. M.

USSR/Biology - Botany

Card 1/1 : Pub. 86 - 36/46

Authors : Griner, B. M.

Title : Tiger flower

Periodical : Priroda, 43/9, 118-119, Sep 1954

Abstract : A description is given of a variety of the tiger flower called in Russian the "peacock" tiger flower, along with some directions as to its cultivation. Illustration.

Institution :

Submitted :

GRINER, B.M.

GRINER, B.M.

Some problems of technical equipment of botanical gardens of the
U.S.S.R. Biul.Glav.bot. sada no.17:109-111 '54. (MLRA 8:3)

1. Botanicheskiy sad lekarstvennykh rasteniy Moskovskogo farmatsevticheskogo instituta.
(Botanical gardens)

GRINER, B.M.

Japanese quince in the Moscow region. Priroda 42 no.11:115-116 N '53.
(MLRA 6:11)

1. Botanicheskiy sad Moskovskogo farmatsevticheskogo instituta.
(Moscow region--Quince) (Quince--Moscow region)

GRINER, B. M.

Moscow - Botanical Gardens

Botanical garden of medicinal plants of the
Moscow Pharmaceutical Institute. Biul. Glav.
bot. sada no. 10, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

GRINER, A. S.

DECEASED
C/1964

1964

Coal Mining

GRINENKO, Yu.S., inzh:

Field fuel filling station. Torf.prom. 38 no.2:35 '61. (MIRA 14:3)

1. Torfopredpriyatiye Tesovo 1.
(Tesovo--Peat industry--Equipment and supplies)

GRINENKO, Yu.S., inzh.

Mechanical removal of snow and frozen layer from ridges. Torf. prom.
35 no.3:33-34 '58. (MIRA 11:5)

1.Torfopredpriyatiye Tesovo I.
(Peat)

GRINENKO, Yu.S., inzh.

Tool for dismantling drums of friction clutches of the DT-54 tractor.
Torf.prom. 34 no.6:34-35 '57. (MIRA 10:12)

1. Torfopredpriyatiye Tesovo 1 tresta "Lengostorf."
(Clutches (Machinery))

GRINENKO Yu. S.
GRINENKO, Yu.S., inzhener.

Ridger for collecting milled peat into strips for chain elevator
machines. Torf.prom. 34 no.5:35 '57. (MIRA 10:10)

1. Torfopredpriyatiye Tesovo I.
(Peat machinery)